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Prepn. of poly-fluoroalkyl ester cpds. of ethylene-glycol used as solvents - from ethylene glycol and fluoroethylene cpds. in polyester solvent with metal hydroxide and quaternary ammonium salts

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Patent Family:

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SU 1810324	A1	19930423	SU 4883110	A	19901115	199425 B

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Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
SU 1810324	A1	3	C07C-043/12	

Abstract (Basic): SU 1810324 A

Ethylene glycol is reacted with tetrafluoro- or tri:fluoro-chloro-ethylenes in a medium of ethylene glycol derivs. e.g. diglyme with potassium or sodium hydroxide catalyst and quat. ammonium salts to yield poly:fluoroalkyl esters of ethylene glycol of formula (RFHCCF₂OCH₂)₂ where R is F or Cl. The quat. ammonium salts have the formula (R₁)₃R₂N(+)X(-), where R₁ is 2-4C alkyl, R₂ is CH₂Ph or R₁ and X is Br or Cl. The molar ratio of ethylene glycol, hydroxide, ammonium salt and solvent is 1:0.14-0.4:0.01-0.05:1.0-6.0.

USE/ADVANTAGE - Used as solvents and intermediate cpds. The yield and rapidity of process are improved. In an example of the prepn. of bis(1,1,2,2-tetrafluoro)ethyl ether of ethyleneglycol, 3.1 g. of ethylene glycol, 27 g. of diglyme, 0.56 g. of powdered caustic soda and 0.26 g. of triethylbenzylammonium chloride were mixed to complete soln. Tetrafluoroethylene was bubbled through at 1 l/h. at 55-60 deg.C. After 2 hrs. the same quantities of soda and ammonium salt were again added and the reaction continued for 1 hr. 8.9 g. of olefin were absorbed. After pouring into water, sepn. of the lower layer, rinsing with water and sulphuric acid, drying and distn. 10.2 g. of prod. were obtd.

Dwg.0/0

Derwent Class: E16